

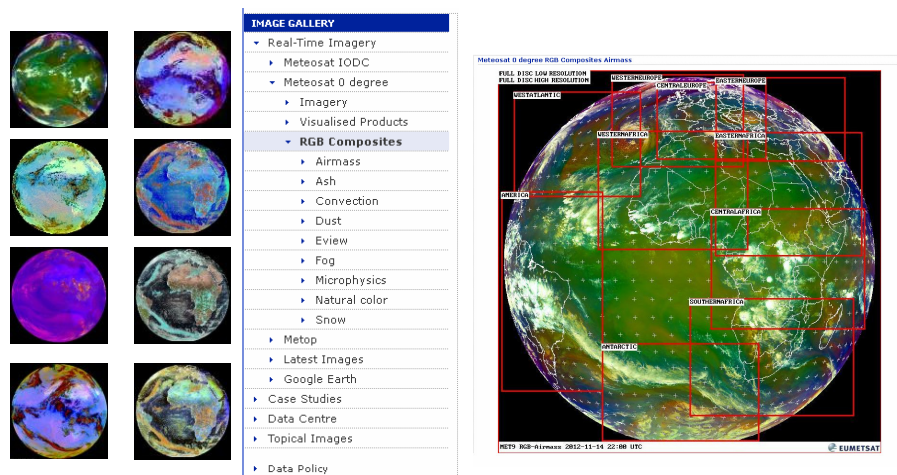
Effective training and use of RGB satellite products for Forecasters

Available online resources

Resources available

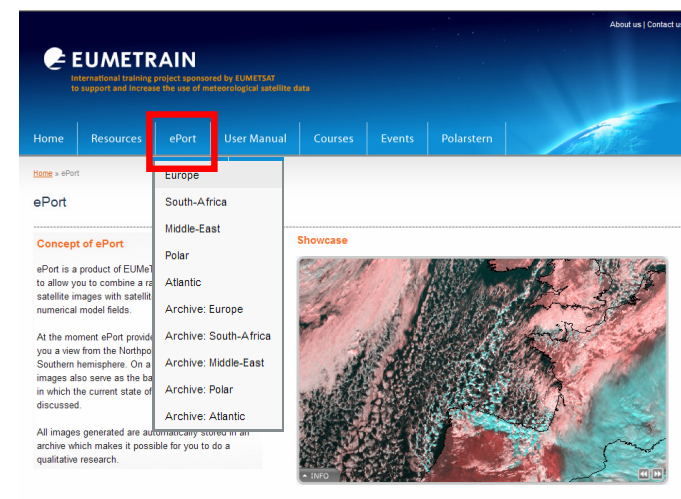
- Real time Meteosat geostationary RGB products
- Chris Down / Kevin Su experimental pages – superimposing MODIS RGB products on hourly Geostationary images etc. (Bureau only)
- Case studies selected from EUMETSAT and JMA Image Libraries. Suitable case studies for training to be linked to Melbourne CoE VLab page
- A very useful and detailed COMET training module.

Real Time Geostationary RGB products from Eumetsat



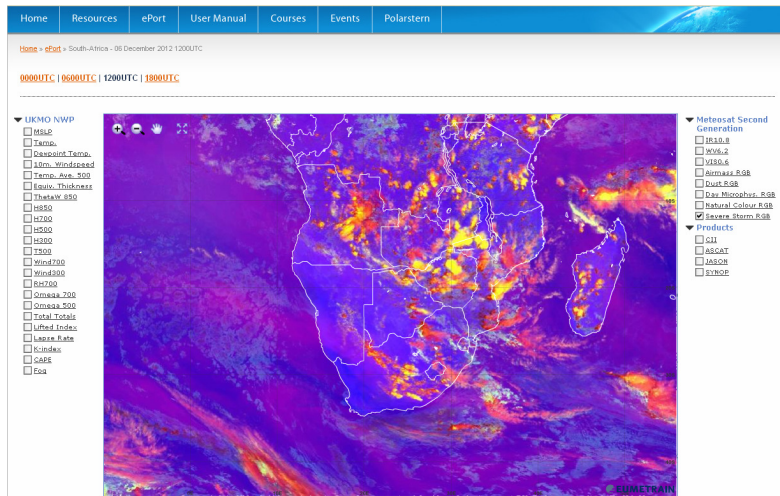
from <http://oiswww.eumetsat.org/IPPS/html/MSG/RGB/>

Real Time Geostationary RGB products from Eumetsat – the ePort



from <http://eumetrain.org/eport.html>

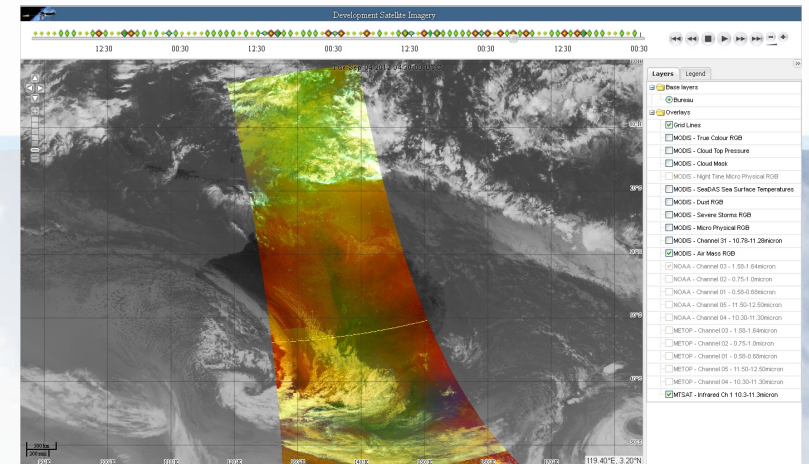
Real Time Geostationary RGB products from Eumetsat – the ePort



from <http://eumetrain.org/eport.html>



We have started to develop a visualisation tool similar to SATREP online (designed by Christopher Down, Chen Hsu Su).

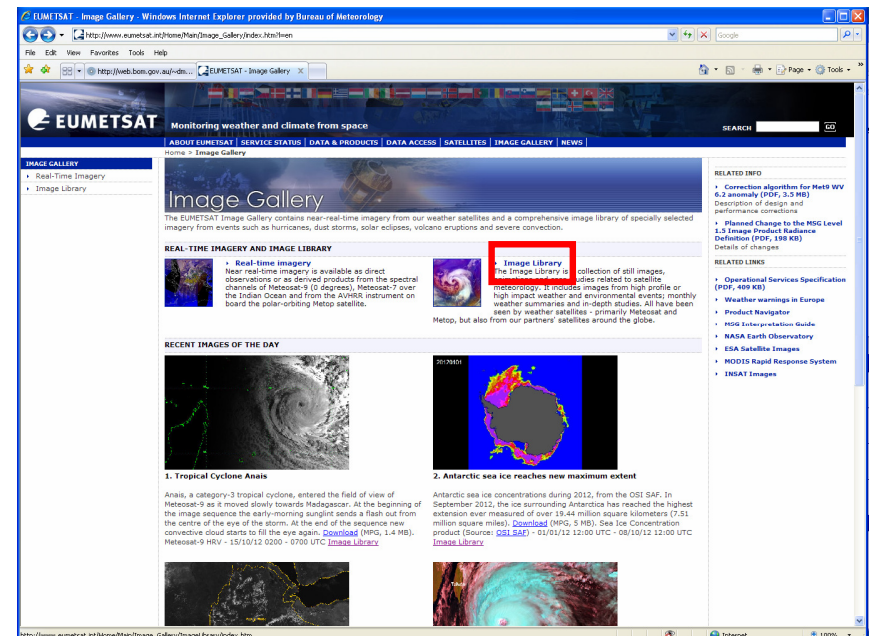


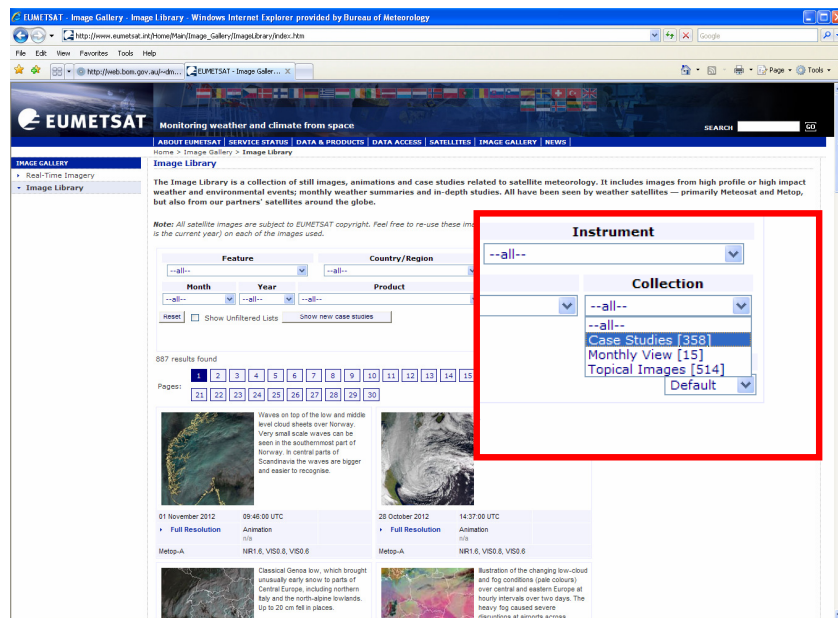
<http://oeb-sat-xband/sat/>

EUMETSAT case studies



from <http://www.eumetsat.int/Home/index.htm>



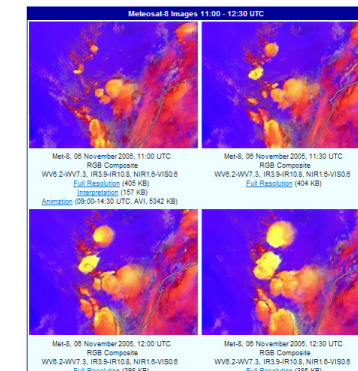


Severe weather over South Africa and Botswana (6 November 2005)

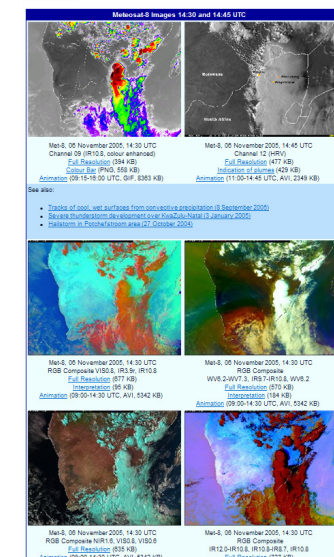
by Estelle de Coning ([South African Weather Service](#)) and Jochen Kerkmann ([EUMETSAT](#))

During the weekend of 4-6 November 2005 heavy rainfall across South Africa brought welcome relief after very hot (heat wave) conditions over most of the country. The persistent heavy falls led to local flooding in many areas over the southern parts of the country where rainfall figures in excess of 150 mm in 24 hours were reported at East London. Over the northern parts of the country large amounts of rain fell in short periods of time leading to local flooding and considerable damage was caused by strong winds. Electricity cables were damaged which led to power outages, roofs were blown off and informal settlements were destroyed. In some villages east of Polokwane (21 85 and 24 45) a 10 year old boy drowned when his tractor washed away. Three women were injured when their houses collapsed and 50 newly built houses were destroyed. West of Polokwane power lines were damaged: five of the pylons were damaged and one blown over, each of these weighing about 20 tons.

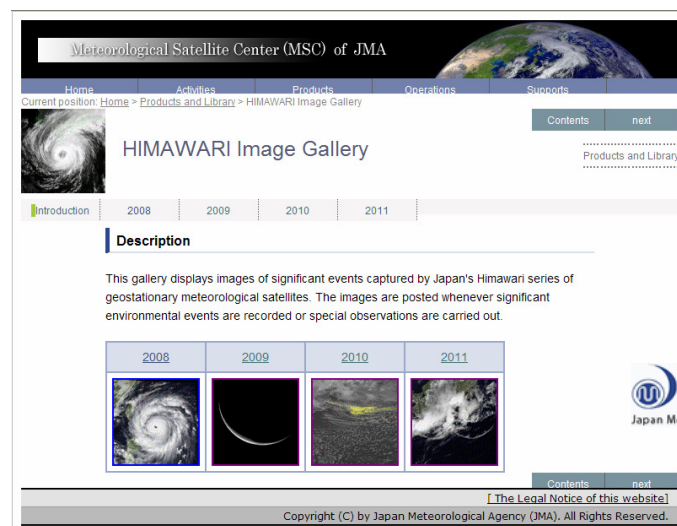
On 4 November rainfall amounts over the northern most province of South Africa (Limpopo, see [Map of South Africa](#), JPG, 90 KB) were less than 10 mm, but on the 5th rainfall figures were between 20 and 50 mm. The rest of these two days left the ground fairly moist in this area and thus an area of cloudless, rain-cooled surface existed over the province in the early hours of the 6th. Convection started WNW of the Limpopo province on the surface dryline and migrated towards the ENE (along with the upper air flow) and first entered the area of interest during the early afternoon. At 11:00 UTC the RGB composite image shows the first explosive development with strong updrafts on the western border of the moist area (see interpretation below upper left image). Thirty minutes later, a second severe storm develops further to the northeast (see upper right image). The bright yellow colour indicates cold, thick ice clouds with small ice particles (strong updrafts). At 12:30 UTC, both storms show strong development (strong cooling rates, strong increase of storm area, small ice particles) with signals of a U-shaped storm (see [IR10.8 image](#), 12:30 UTC, JPG, 300 KB). Using IR10.8 colour enhancement the cloud top temperatures of these very severe storms is indicated at -55°C.



It is interesting to note that after the passing of the storms new moisture advection left by the heavy convection are clearly visible in the infrared images and blue area in the RGB composite (V50.6, IR10.8, IR12.8) (see interpretation below the image).

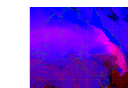


Case studies within JMA Himawari Image Gallery



JMA's Himawari Image Gallery examples

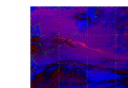
Red dust storm in Australia (23 September, 2009)



A strong storm of dust (referred to as red dust) blew from inland parts of the Australian continent toward the east coast. Red dust is -

[GIF Image](#) [150 KB], [Animation](#) [about 162 KBytes per image]

Volcanic ash plume from Sarychev Peak in the Kuril Islands (14 - 15 June, 2009)



The eruption of Sarychev Peak in the Kuril Islands produced a volcanic ash plume extending eastward and westward. The plume is shown in -

[GIF Image](#) [93 KB], [Animation](#) [about 90 KBytes per image]

Volcanic ash from Mt. Asama (1 February, 2009)



The eruption of Mt. Asama (located 140 km from Tokyo) caused volcanic ash to drift southeastward and pass over the Tokyo -

[PNG Image](#) [29 KB], [Animation](#) [about 25 KBytes per image]



from http://mscweb.kishou.go.jp/gallery/index_gallery_e.htm

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Melbourne VLab Centre of Excellence

History of the Melbourne VLab Centre of Excellence

Mission Statement

Inspiring people through innovative & engaging development programs.

- WMO BIP-M Learning Objectives
- Basic Satellite Competencies
- "Training Objectives" (Environment Canada)

News

- Aviation Week 2012
- VIIRS Workshop Resources

Resources Library

- Region V Case Studies
- JMA Virtual Laboratory
- EUMETSAT Online Training Library
- COMET (ESRC)
- CIRA Virtual Resources Library
- WMO Virtual Resources Library

Sponsoring Satellite Operator

- JMA/MSK
- JMA Virtual Laboratory

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Date created: Sat, 16 Jun 2012
Last modified: Tue, 28 Aug 2012 06:39:24 +0000
Maintained by: Bureau of Meteorology Training Centre

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from <http://www.virtuallab.bom.gov.au/>

COMET module

Multispectral Satellite Applications: RGB PRODUCTS EXPLAINED

Volcanic eruption of Mt Nyamuragira

Weather over the NE Atlantic Ocean

Fires over the Korean Peninsula

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http://www.meted.ucar.edu/npoess/multispectral_topics/rgb/